

Analyses of AB1114 Schools

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This report examines the progress of the 219 Elementary, 54 Middle and 31 High Schools given AB1114 Awards for their improvement in 1999-2000. The main question addressed is whether these schools continue to improve in the 2000-2001 period, or at least maintain the improvement made in the 1999-2000 period. The analyses for these subsets of Elementary, Middle, and High Schools follow the format of the analyses of improvement over three years for all California schools described in Section 2 of the report "Year 2001 Growth Update: Interpretive Notes for the Academic Performance Index" available from the API Research Reports page at www.cde.ca.gov/psaa/apiresearch.htm

1. Elementary Schools

Of the 219 AB1114 awards for '99-2k, 218 have year 2001 Growth API scores. Looking over the 3 years of API scores for these schools we have

Variable	N	Mean	Median	Q1	Q3	Minimum	Maximum
API_99	219	539.15	550.25	497.31	591.75	365.00	626.25
API_2k	219	637.65	647.38	599.75	681.38	484.75	747.25
API_01	218	656.28	660.31	621.75	699.13	487.19	789.50

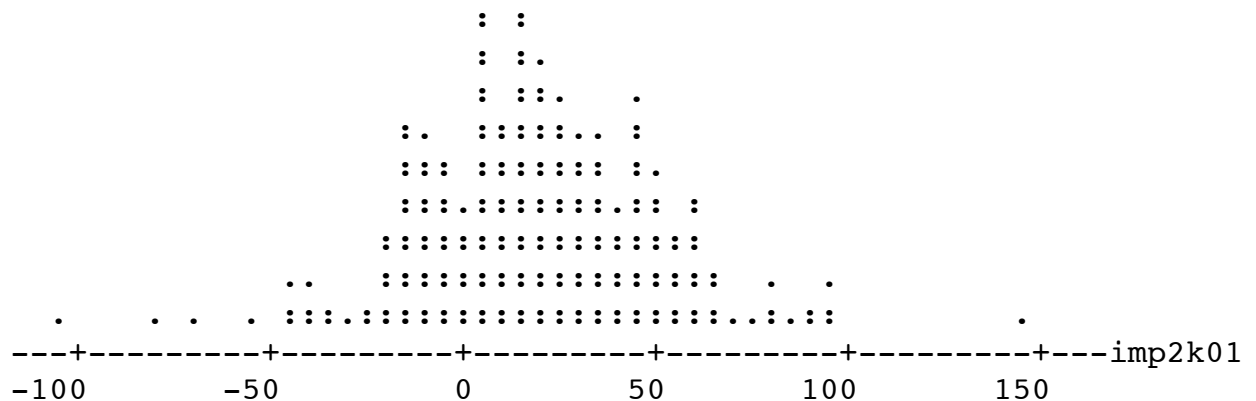
Clearly, this group of schools continues to show improvement in 2k-01, albeit smaller improvement than seen in '99-2k. Most directly, look at the year-to-year improvements for these schools (denoted by imp992k and imp2k01):

Descriptive Statistics: imp992k, imp2k01

Variable	N	Mean	Median	Q1	Q3	Minimum	Maximum
imp992k	219	98.50	92.44	84.50	107.38	73.50	188.94
imp2k01	218	18.89	17.56	-2.56	40.50	-104.75	145.69

A dotplot of improvement in the year 2000-2001 period supplements the descriptive statistics above:

Dotplot: imp2k01



The basic picture is that these schools do not make quite as much

improvement in '00-01 as Elementary Schools overall, though it's very close: median improvement for all Elementary Schools is 19.03 versus 17.56 above. (Refer to Table 1, Year 2001 Growth Interpretive Notes for the all Elementary Schools results). But a more relevant comparison would be with improvement of lower decile schools (e.g. decile 1-6 schools) for which median improvement is more than 25 points.

The main displays on consistency of improvement are provided by Figures 1-2 and Table 1. Each Figure plots improvement in 2000-2001 (labeled APIimp_2k01) versus improvement in 1999-2000 (labeled APIimp_992k). And in Figure 1, for example, one can locate a few schools such as the Elementary School that improved 102 points and then declined 105 points. That's of interest, but it would be foolish to let individual points overshadow the main message of these data. Furthermore, part of the value of the API as an information system is to allow identification of such schools for possible study.

Part of the concern about sustained improvement in the AB1114 schools may stem from a superficial breakdown of GPA awards in 2001. Less than half of the 1999-2000 AB1114 Elementary Schools qualify for GPA Awards for 2001.

GPA01	Count
NO	114
YES	103
N=	217

Figure 2 is a colorized version of Figure 1. The colorized plot has the scheme: Black (no GPA in 2001), Green (GPA in 2001). The colorized plot shows that there are a number of AB1114 schools that made substantial improvement (e.g. 50 points) in the school-wide API scores '00-01 but did not qualify for GPA in 2001 (presumably dinged by a subgroup).

A more comprehensive (but also slightly more complicated) description of the sustained improvement is provided by Table 1, which mimics Table 9 of Year 2001 Growth Interpretive Notes. Table 1 seeks to quantify the features displayed in Figure 1. Select schools which exceed a stated improvement level (ImpLevel) in the '99-00 interval. Then investigate the subsequent improvement in '00-01 for those schools: for the schools improving at least ImpLevel points in '99-00, what does their improvement in '00-01 look like? First is the proportion of those schools also making positive improvement in '00-01. Second is a list of summary statistics for the '00-01 improvement: lowest decile (10% of the included schools improve less than the lowest decile), lower quartile (75% of the included schools improve more than this lower quartile), median improvement, and upper quartile of improvement.

For example, Table 1 shows that all 218 AB114 Elementary schools improved at least 50 points in the 1999-2000 interval. Of those 218 schools nearly three-quarters (.729) also had positive improvement in the 2000-2001 interval. The median improvement for those 218 schools is 17 points, and a quarter of these schools improved more than 40 points. Only 10 percent of these schools declined 16 points or more.

Furthermore, 82 of the 218 AB114 Elementary Schools improved at least 100 points in '99-00. Of these strongest improvers, again almost three-

quarters (.732) also improve in '00-01. Half of these schools improved more than 20 points, a quarter of these schools improved more than 45 points, with only 10 percent of these schools declining 21 points or more.

Table 1

Consecutive Improvement for AB1114 Elementary Schools (n = 218)

ImpLevel for 99-2k	Number of Schools exceeding ImpLevel	Proportion of those schools improving in 2000-2001	Improvement 2000-1 {lowest decile lower quartile median upper quartile}
50	218	0.729	-16.5 -2.5 17.375 40.25
100	82	0.732	-21.625 -2.125 20.375 45.25
125	24	0.708	-32.75 -16.5 11.25 35.

In many news reports and public statements various parties have used a "see-saw" metaphor to refer to the three years of API data, presumably indicating either a "V" or "inverted V" pattern for a school's score (e.g. schools making initial gains in '99-00 fall back in '00-01). The reality is that there are many schools making steady improvement for each school that goes up and down. So those desiring a metaphor would be better served by talking in terms of schools on an ascending staircase than schools riding a see-saw.

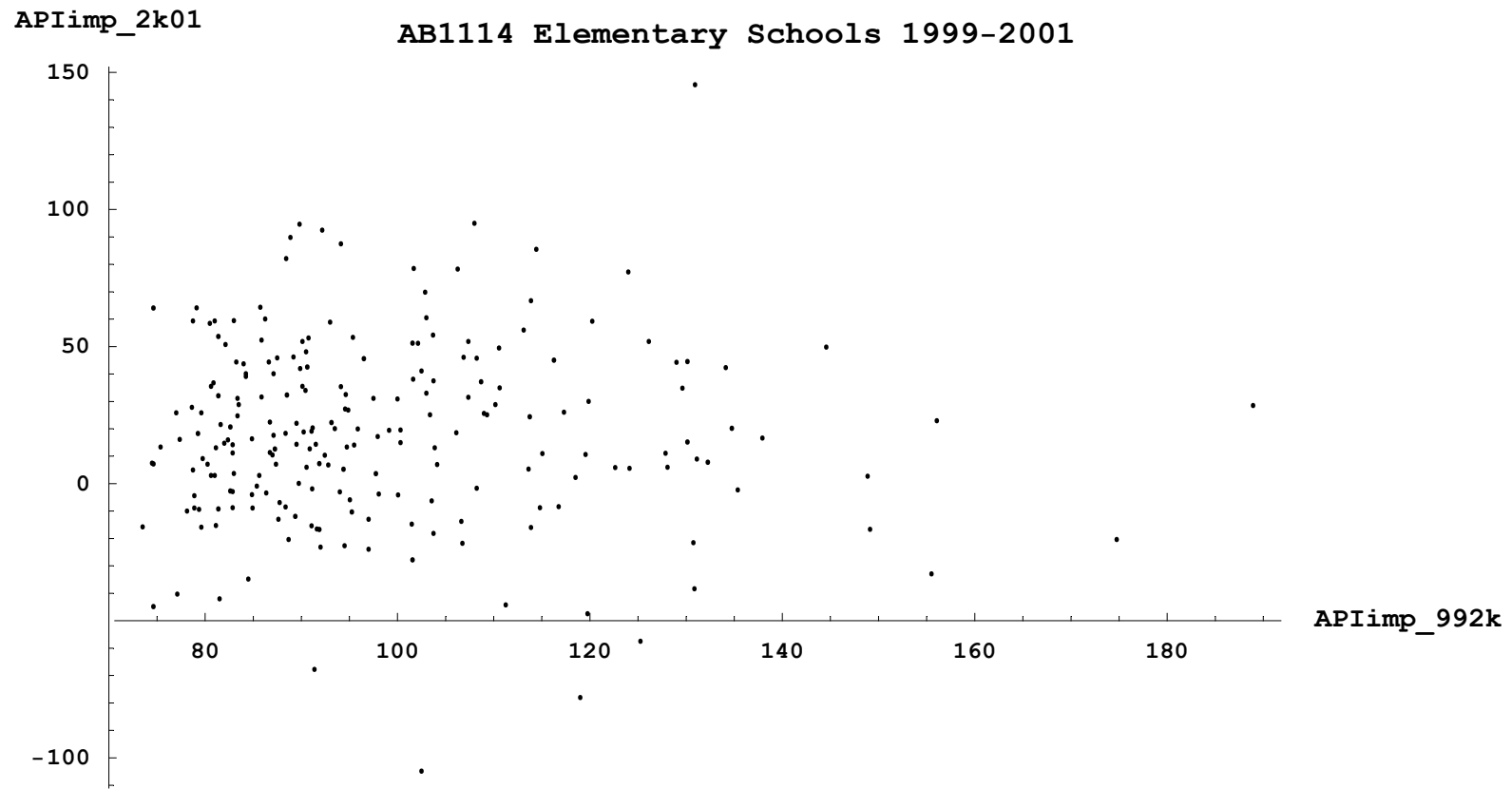
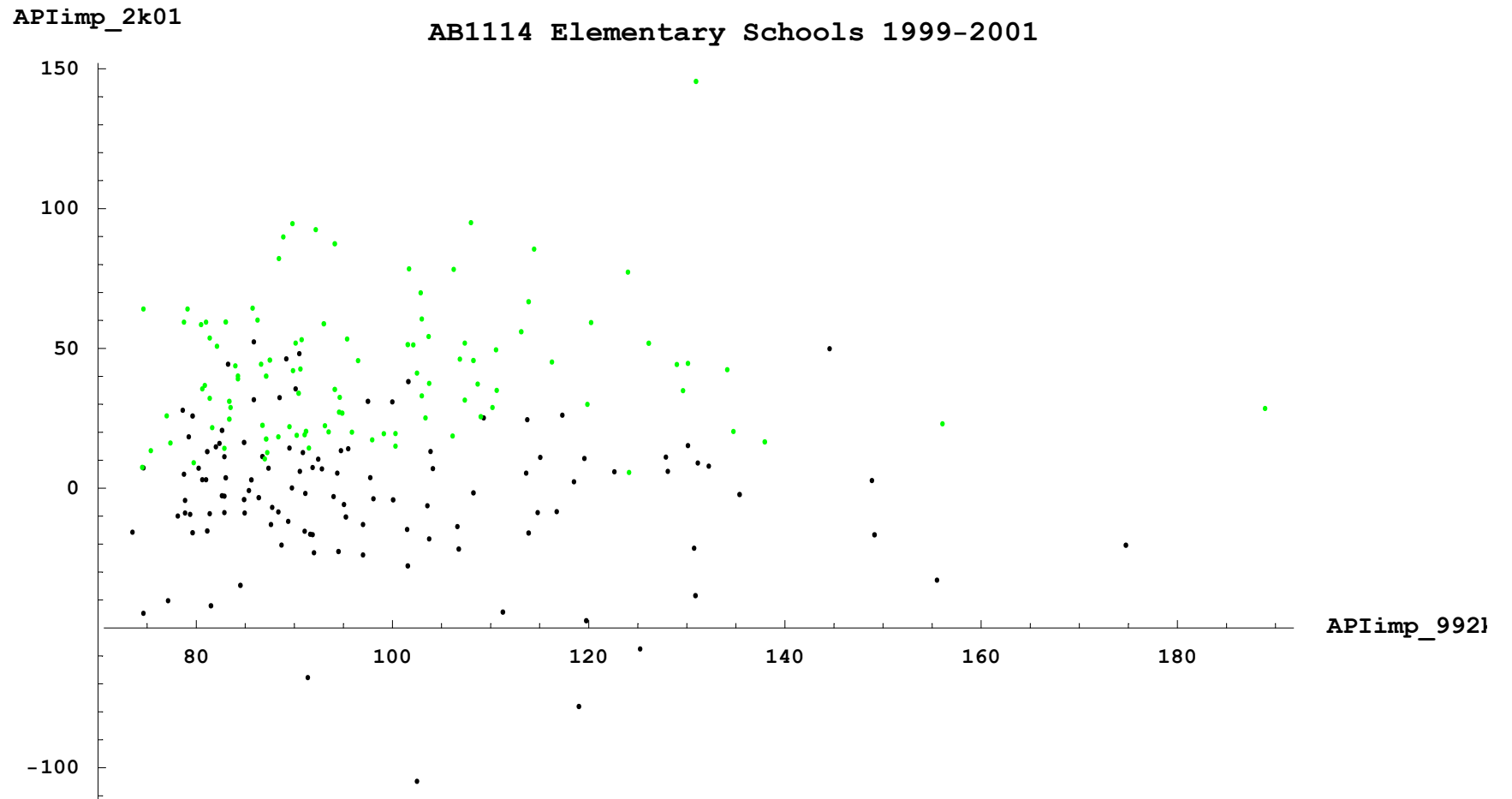


Figure 1.

Figure 2.



2. Middle Schools

For the 54 AB1114 Middle Schools, a summary of API scores and year-to-year improvements, including dotplot for imp2k01, are given below.

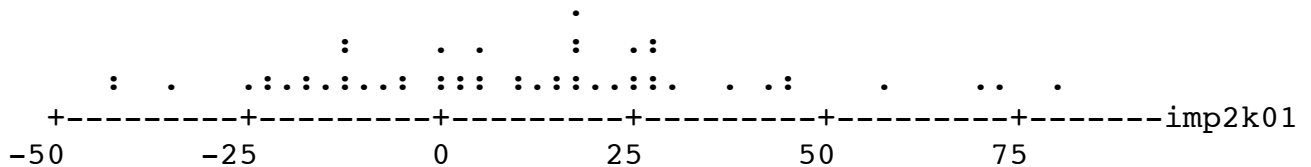
Descriptive Statistics: API_99, API_2k, API_01

Variable	N	Mean	Median	Q1	Q3	Minimum	Maximum
API_99	54	559.06	578.81	512.47	608.84	403.56	632.00
API_2k	54	617.21	632.06	568.06	657.19	482.31	710.63
API_01	54	627.05	635.81	576.75	668.72	505.00	775.00

Descriptive Statistics: imp992k, imp2k01

Variable	N	Mean	Median	Q1	Q3	Minimum	Maximum
imp992k	54	58.15	56.94	49.53	63.41	40.13	92.81
imp2k01	54	9.84	10.13	-11.91	25.69	-43.75	81.06

Dotplot: imp2k01 for AB1114 Middle Schools



The median improvement for the 54 AB1114 Middle Schools in '00-01 is 10.13, compared with 11.75 for all Middle Schools (see Table 2 Year 2001 Growth report).

The main displays on consistency of improvement for the Middle Schools are provided by Figures 3-4 and Table 2. Each Figure plots improvement in 2000-2001 (labeled APIimp_2k01) versus improvement in 1999-2000 (labeled APIimp_992k). In Figure 3, the majority of schools show sustained improvement.

Less than half of the 1999-2000 AB1114 Middle Schools qualified for GPA Awards for 2001.

GPA01	Count
0	31
1	23
N=	54

Figure 4 is a colorized version of Figure 3. The colorized plot has the scheme: Black (no GPA in 2001), Green (GPA in 2001). The colorized plot shows that there are a number of AB1114 schools that made substantial improvement (even as much as 80 points) in school-wide API scores '00-01 but did not qualify for GPA in 2001.

Table 2 repeats the display in Table 1, using the 54 Middle Schools. As in Table 1, select schools which exceed a stated improvement level (ImpLevel) in the '99-00 interval. Then investigate the subsequent improvement in '00-01 for those schools: for the schools improving at least ImpLevel

points in '99-00, what does their improvement in '00-01 look like? First is the proportion of those schools also making positive improvement in '00-01. Second is a list of summary statistics for the '00-01 improvement: lowest decile (10% of the included schools improve less than the lowest decile), lower quartile (75% of the included schools improve more than this lower quartile), median improvement, and upper quartile of improvement.

For example, Table 2 shows that all 54 AB114 Middle schools improved at least 25 points in the 1999-2000 interval. Of those 54 schools nearly two-thirds (.63) also had positive improvement in the 2000-2001 interval. Half these schools improved at least 10 points, and a quarter of these schools improved more than 25 points. Only 10 percent of these schools declined 23 points or more.

Furthermore, 40 of the 54 AB114 Middle Schools improved at least 50 points in '99-00. Of these schools, more than half (.575) also improved in '00-01. A quarter of these 40 schools improved more than 27 points, with only 10 percent of these schools declining 24 points or more.

Table 2

Consecutive Improvement for AB1114 Middle Schools (n = 54)

ImpLevel for 99-2k	Number of Schools exceeding ImpLevel	Proportion of those schools improving in 2000-2001	Improvement 2000-1 {lowest decile lower quartile median upper quartile}
25	54	0.63	-22.95 -11.875 10.125 25.5
50	40	0.575	-24.1875 -13.4375 3.5625 27.4375
75	7	0.571	-36.275 -9.45313 57.5 71.4688

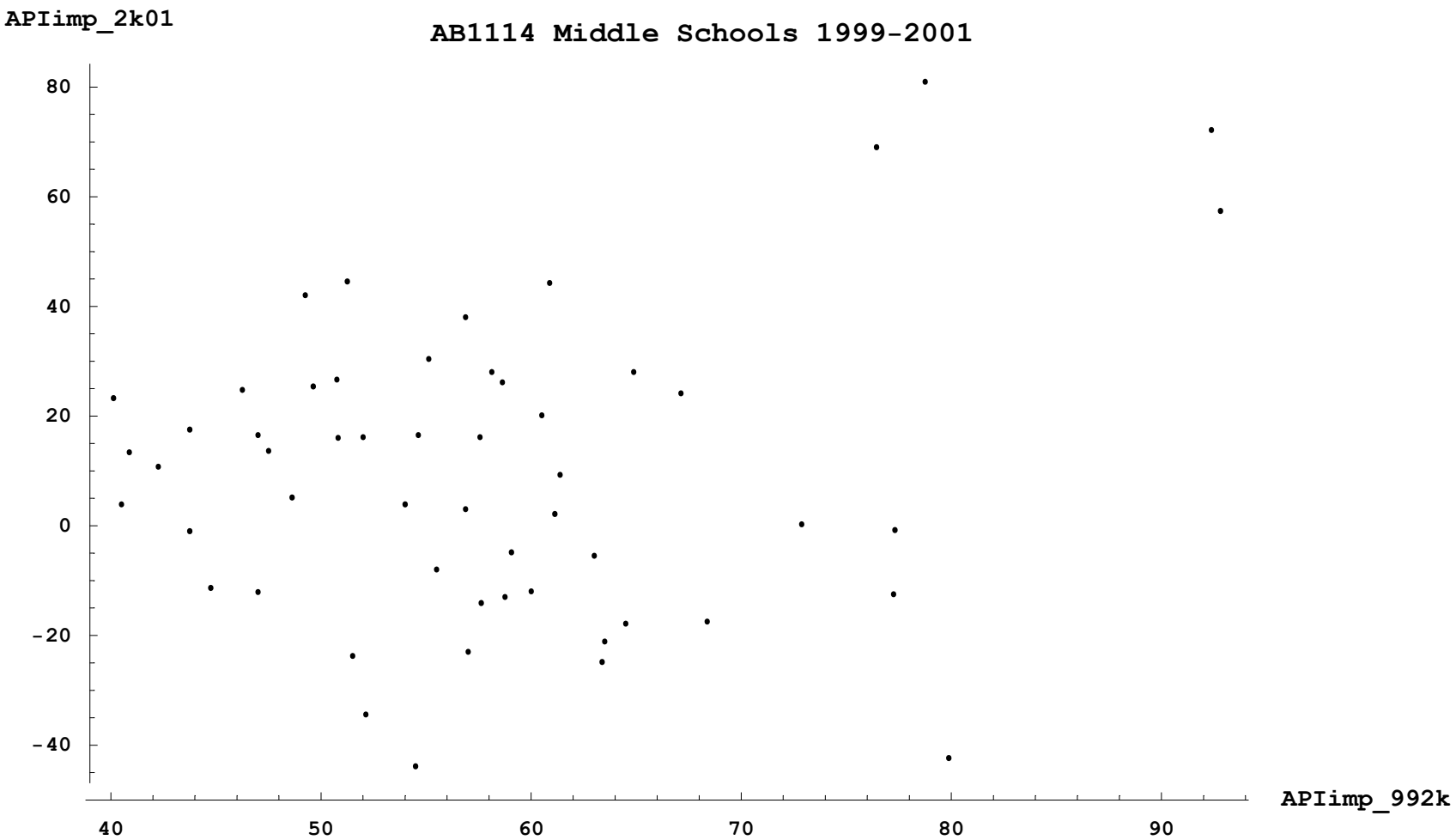


Figure 3.

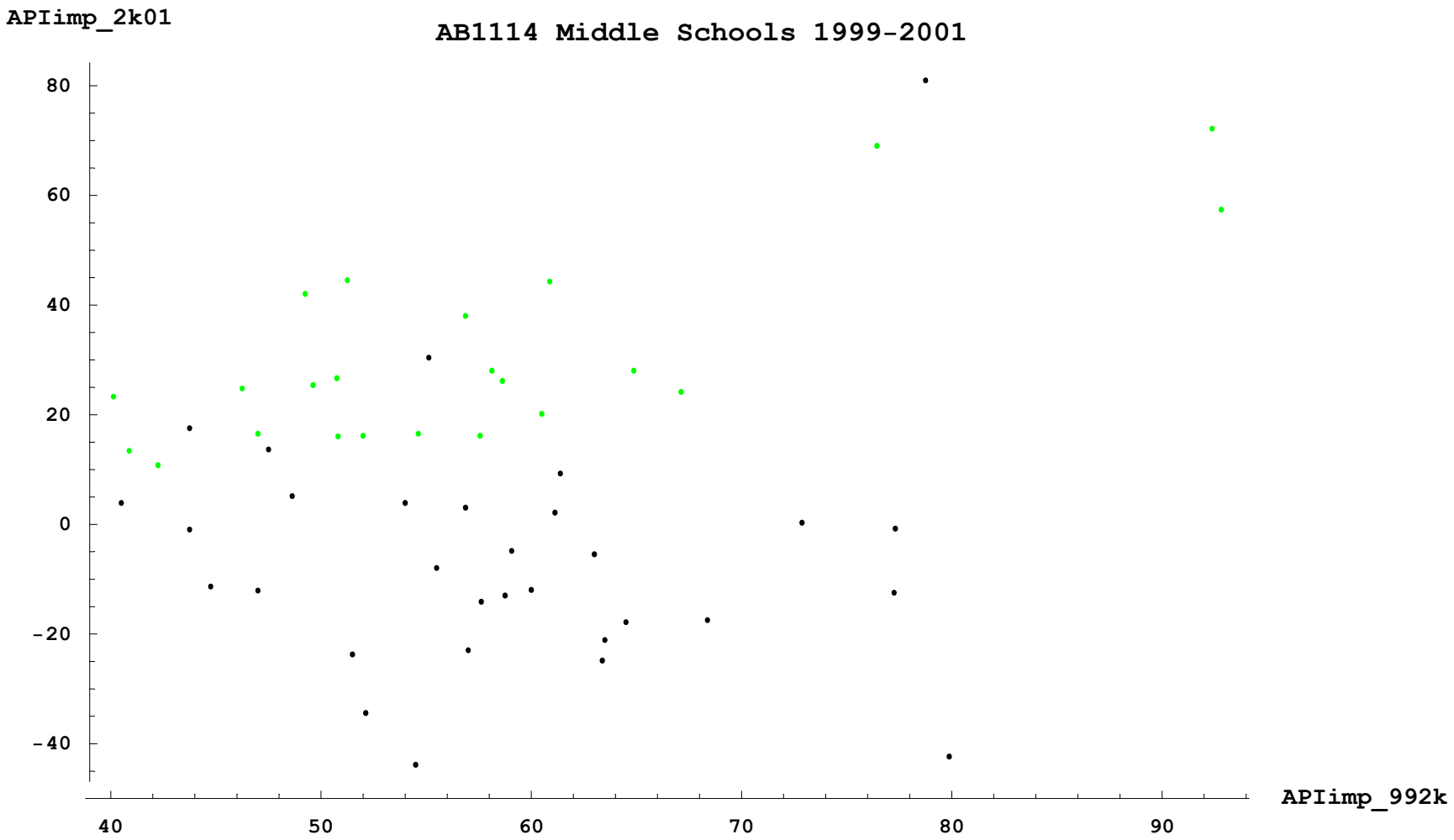


Figure 4.

3. High Schools

Only 31 High Schools received AB1114 awards for '99-00 improvement, so the data analysis will not be as extensive as above.

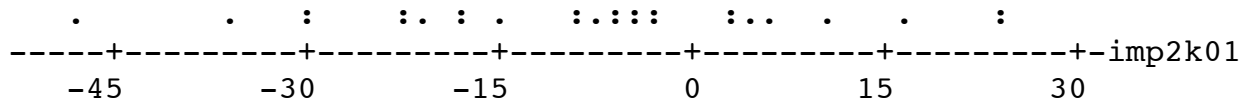
Descriptive Statistics: API_99, API_2k, API_01, AB1114 High Schools

Variable	N	Mean	Median	Q1	Q3	Minimum	Maximum
API_99	31	546.3	566.5	506.1	589.9	404.8	617.9
API_2k	31	591.2	613.4	546.1	638.1	444.9	662.0
API_01	27	588.9	601.9	562.4	632.0	455.0	664.9

Descriptive Statistics: imp992k, imp2k01, AB1114 High Schools

Variable	N	Mean	Median	Q1	Q3	Minimum	Maximum
imp992k	31	44.96	42.63	33.88	51.50	20.25	87.00
imp2k01	27	-8.26	-6.25	-21.63	3.13	-47.50	23.63

Dotplot: imp2k01 for AB1114 High Schools (n=27)



The median improvement for the 27 AB1114 High Schools with data in '00-01 is -6.25 (whereas median improvement for all High Schools in '00-01 overall was a meager 2.5) But even for these High Schools, the substantial '99-00 improvement is not totally dissipated: only a quarter of these schools declined more than 21 points in '00-01, whereas half improved more than 42 points in '99-2k. Only 5 of the 31 AB1114 High Schools received GPA awards in 2001. Note that AB1114 awards were made for rather modest levels of 1990-2000 improvement; one AB1114 High School had improvement of only 20 points, and 8 of the 31 High Schools had improvement less than 36 points.

Table 3 repeats the display of Tables 1 and 2 for the collection of 27 High Schools. Only slightly more than one-quarter (.296) of the AB1114 High Schools improved in '00-01; the same goes for the subset of 19 schools that improved at least 40 points in '99-00 (5/19 = .263 improving).

Table 3. Consecutive Improvement for AB1114 High Schools (n = 27)

ImpLevel for 99-2k	Number of Schools exceeding ImpLevel	Proportion of those schools improving in 2000-2001	Improvement 2000-1 {lowest decile lower quartile median upper quartile}
20	27	0.296	-30.475 -20.8125 -6.25 3.0625
40	19	0.263	-26.925 -20.8125 -7. 1.
